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- (d) All three manuals are classified Top Secret and are kept in the Secret Documents Section.
2. Soviet artillery units are placed under the command of tactical troops which they support until they fulfill their assignment. The level of the attachment for support depends upon the extent of the artillery mission, the type of combat which is planned and the decision of the division, corps or army commander. Whenever the deputy commander for artillery feels that the artillery organic to a rifle unit is insufficient for the planned mission, an artillery battery may be attached to a rifle battalion or regiment for support, an artillery battalion may be attached to a rifle regiment or division for support, or an artillery regiment may be attached to a rifle regiment, division or corps for support.
 3. An artillery division in combat is subordinated directly to artillery corps, and the corps to an army or an army group. A separate artillery regiment is subordinated directly to a rifle division or corps in combat. An artillery corps is attached to an army or army group for combat.
 4. Artillery reconnaissance men and forward observers are too valuable to be sent out to infiltrate the enemy front prior to an attack even to ensure more accurate fire direction. Instead, infantry patrols are infiltrated and remain inside enemy lines with a radio in order to direct fire. In a Soviet artillery unit the forward observer, [] is actually the unit commander - 50X1-HUM whether at battery, battalion, regimental or division level. The observation post is on the front line, even at division level, and includes the respective commander with radio, telephone, and reconnaissance men, and messengers. In an emergency the observer, the unit commander, can send his reconnaissance men to infiltrate enemy lines and report to him by radio, but usually only infantry patrols perform this duty.
 5. Firing positions are selected according to terrain, suitability for camouflage, visibility (guns must have a 360 degree traverse), and easy approach facilities for ammunition supply from the rear. Artillery positions are never in front of mountains or woods. When there is sufficient time, the regimental or divisional artillery deputy checks the selection of firing positions; otherwise battalion commanders set up firing positions as necessary. Upon occupation, two large foxholes are dug by the gun crews for their protection. The guns are in revetments, and are camouflaged with nets, twigs, and earth.
 6. Usually Soviet artillery is moved by rail over long distances (100 km or more), and by organic transport (prime movers) for distances under 100 km. The movement itself is usually cross-country, can negotiate steep hills up to 45 degrees grade, and is not road-bound. Point guards, (not special traffic control personnel) drawn from gun crews, designate fords, ditches and passages for the units on the move. Vehicles travel 30 meters apart, at 40 km per hour in daytime, 25 km at night. Tanks and prime movers may carry logs which are used to make temporary bridges. Usually engineer troops clear the road for vehicular traffic when necessary.

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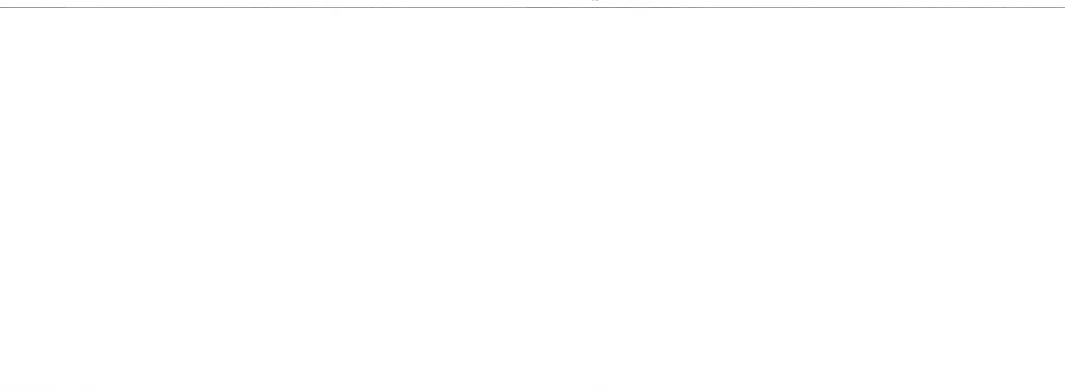
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7. Displacements in support of attack, withdrawal or defense are ordered as necessary at the discretion of the artillery commander according to tactical conditions and the need for flexibility. There is no standard procedure, but usually 57-mm AT guns move with the infantry, 85-mm AA guns are two to three km behind the infantry, light howitzer artillery is three to six km behind the front lines, and heavy artillery is about eight to twelve km behind the lines. The heavy artillery does not frequently displace because it can fire up to a range of 15 km; consequently, a displacement of one or two km is of no importance and fire can still be transferred by direction of the artillery commander.

8. For aiming the guns the following steps are taken:

- (a) The Soviet practice of registration is called "Vilka" (fork) and zeros the target with three or four rounds. After each round the observer corrects fire by directing a shift to left, right, over or short as necessary. The observer attains this vertical and horizontal control by calling for a shift of fire according to the error indicated by the graduations of the reticle on the battery commander's scope: the observer has a battery commander's scope, binoculars, a telephone and a radio for his use. After the target has been zeroed-in (before commencement of combat) it is designated by reference points and entered on the plotting chart.

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- (d) Soviet artillery consults weather information a great deal in firing. There are special firing tables for rainy or other inclement weather, and the propellant zones are changed according to meteorological conditions.

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- (e) there is no provision in Soviet artillery for calibration of guns within a unit.

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The only method for bringing the fire of one gun on the same target as the other guns of a battery, was described above, [See paragraph 8b].

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Fire Control Procedures

13. The techniques for the adjustment and control of fire are prescribed in the Artillery Field Manual of 1945 /See paragraph 1 above/

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- (a) The regimental or division artillery deputy decides which target will be fired upon, and how many guns, rounds, and which types of rounds will be used against the target.
- (b) Fire direction centers are maintained at battery, battalion, regiment, and division levels.
- (c) Firing charts are used for indirect firing, to make adjustments for weather changes and for zeroing guns. No firing charts are used for AAA guns when firing on aircraft or tanks, since these are visible targets.
- (d) The topography platoons assist in plotting the targets and in map reconnaissance work. The intelligence platoon is used to reconnoiter new targets, to infiltrate behind enemy lines and to direct fire by radio contact with the Battery or Battalion CO.
- (e) If the artillery commander of a battalion or regiment considers it necessary to bring all the guns of a battalion on a target, he issues the pertinent order by radio or telephone. Soviet practice is to fire volleys from all guns in order to destroy a target; timed fire is not used.
- (f) Within one minute after a target is reported the entire battalion must be ready to fire on it. This procedure is being practiced constantly, and high efficiency and speed has been developed. This procedure applies to visible targets - indirect targets are assigned to specific mortar or howitzer batteries.
- (g) Soviet artillery will bring the fire of more than one battalion to bear on the same target of opportunity if necessary. Simultaneous delivery of fire will require one to two minutes time for coordination.

System of Forward Observers

14. The Guide for Training of Reconnaissance Men, Telephone Men and Radiomen (Rukovodstvo Po Obucheniy Razvedchikov, Telefonistov i Radiystov) is the manual which prescribes the training, functioning, and examination of artillery reconnaissance men. The duties of forward observers are prescribed in the Artillery Field Manual of 1945 /See paragraph 1 above/.

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15. In Soviet artillery units the forward observer is the unit CO; ie, the battery commander observes and directs the fire of his battery, and battalion and regimental commanders observe and direct the fire of their units. The CO is located in the observation post with radio, telephone, and reconnaissance men and messengers. The observation post is as close to the front lines as is possible, and an alternate post is used when necessary. The command post of Soviet artillery units is from two to five km behind the front lines and has a staff which deals with logistical problems rather than fire direction or fire control.
16. There are no special forward observers; instead, the forward observers are trained artillery officers who are unit COs. They get their training in conducting maneuvers and exercises with infantry troops. [redacted] infantry is considered the major service, and all other services have only the mission of supporting it. 50X1-HUM
17. A forward observer (either battery or battalion CO) is responsible only for his own sector. If a target appears outside the sector assigned to a forward observer, it is the responsibility of the other forward observer to take action upon it. No rule, however, prohibits one observer from telephoning or radioing the information to the other observer. A forward observer definitely will not direct fire upon a target outside his assigned sector unless he is specifically ordered to do so by his superior.
18. The selection of positions for forward observers and observation posts is determined by terrain features, such as cover, visibility, proximity to targets, and ease of camouflage.
19. Usually the forward observer of a battery controls four guns firing on one target; a battalion forward observer controls 12 guns and a regimental forward observer controls 36 guns. The division commander does not control the fire of his unit, but observes and directs the fire of the entire division. There is no set practice for all cases and procedure may vary. 50X1-HUM
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20. [redacted] forward observers [redacted]
 - (a) Targets are located and designated by reference points and grid coordinates.
 - (b) The battery forward observer reports his observations to the battalion commander and then directs fire upon the target.
 - (c) A forward observer, in reporting to his superior has only one type of report to make, approximately as follows: "Target destroyed, used 12 rounds." If the target is not destroyed, he reports this to the divisional or regimental artillery deputy, who then orders additional fire to destroy the target.
21. There is a forward observer in each battery, four per battalion, and nine per regiment. They vary in ranks from 1st col in the regiment to maj in the battalion and capt in the batteries. Administratively the forward observers are the unit commanders within the regiment.

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22. The forward observer functions with a group which includes one or two telephone men, one or two radiomen, one or two reconnaissance men, and one or two messengers, all of whom are NCOs or privates. Whenever an entire battalion fires on a single target the battalion CO is the only forward observer. If each battery fires on a separate target, each battery has a forward observer in the form of the battery commander. [See Enclosure (A)]

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Communications

23. On the means of communications [] the following information:
- (a) The commander of a supported unit requests fire on a target by telephoning or radioing to his regimental or division commander, who then will order his deputy for artillery to destroy the target. Grid coordinates or reference points are used to designate the target area, and usually no more than five minutes are required before the fire requested is forthcoming.
 - (b) Regiments and higher units have organic artillery but may be given additional artillery for support. Communications between supported troops and the attached artillery must go through the combined commander who is the commanding officer of the supported unit. For example, if an artillery battalion supports an infantry battalion, the infantry battalion commander, as the combined commander, maintains communications with the supporting artillery by radio, phone, or messengers.
 - (c) The Soviets have no artillery liaison officers. Each infantry unit of regimental or higher level has an artillery deputy who has his own staff.
 - (d) The forward observer communicates by telephone, or radio, or through messengers with his unit and the supported unit. He can communicate with all other echelons, either higher, lower, or lateral, by the same means.
 - (e) Artillery regiments have their own artillery telephone men, who lay telephone lines, and artillery radiomen for radio communications. Reconnaissance men or any gun crew members of an artillery battery may be used as messengers between the artillery unit and the supported unit.

Organization and Equipment

24. [] artillery units have liaison or observation aircraft [] either at division, corps or army level. Observation balloons may also be used for fire observation. Aerial observers for artillery are always artillery officers assigned to the respective artillery unit.

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25. [] information on reconnaissance teams:

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- (a) Artillery regiments have special headquarter units of reconnaissance and topographical men []

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- (b) A rifle division has two reconnaissance officers, one lt col, one maj, in its headquarters and one reconnaissance officer on its artillery staff.
- (c) The separate AAA battalion of a rifle division has a Chief of Reconnaissance (capt or lt, who is also the battalion staff signal officer); and two reconnaissance men (pvt, one a senior reconnaissance man), one telephone NCO and three telephone men (pvt, one radio NCO and three radiomen (pvt) all of whom are in the headquarters platoon. The battalion reconnaissance section has a T/E of 21 TAI-43 field telephones, six RBM radio receiver-transmitters, and three motorcycles.
- (d) Each battery of the separate AAA battalion of a rifle division has two reconnaissance privates (one senior reconnaissance man - starshii razvedchik) whose duty it is to spot and identify enemy aircraft, two telephone men, and two radiomen, all of whom are in the headquarters squad. See Enclosure 4

26.

details:

37-mm AA guns

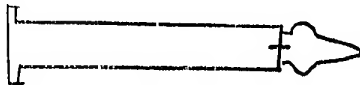
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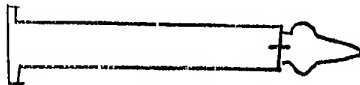
- (a) The 1939 model of the 37-mm AA gun in travelling position weighs 3200 kg with its shield and 3000 kg without it. In firing position the 37-mm AA gun weighs 3100 kg with the shield and 2900 kg without it. Note: the late 1939 model 37-mm AA gun has a shield. My unit, the 932d Sep AAA Bn, had an unknown number of 37-mm AA guns with shields and an unknown number of 37-mm AA guns without shields.
- (b) The vertical range of the 37-mm AA gun is four km, horizontal range is six km, and the most effective range is two and one-half km.
- (c) The 37-mm shell is fixed (Unitarny Snaryad) and has no changes of propellant. The shell arrives from the factory with the MG-8 fuze already affixed. The complete round weighs 735 grams. I do not know the weight of the explosive in the round.

27. Armor piercing rounds for use against tanks and tracer fragmentation rounds for use against aircraft are available for 37-mm and 85-mm AA guns. Armor piercing and HE rounds are available for 76-mm and 122-mm field guns.

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28. In 1944 the Soviets developed a special shell called "Pod Kalibernyy Snaryad" (sub-caliber projectile) for the 57 and 76-mm AT, 76 and 122-mm field guns, and the 85-mm AA and AT guns, which proved to be very effective in armor piercing. It was a fixed shell of the same size as the standard projectile, but it had a different nose.  picture of it as follows:

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[redacted] this type of ammunition [redacted]
[redacted] tanks at ranges of 300 - 600 m. [redacted] pierced the armor of German Tiger
penetrate 20 cm of armor at ranges of 1000 - 1200 m. [redacted] this projectile will

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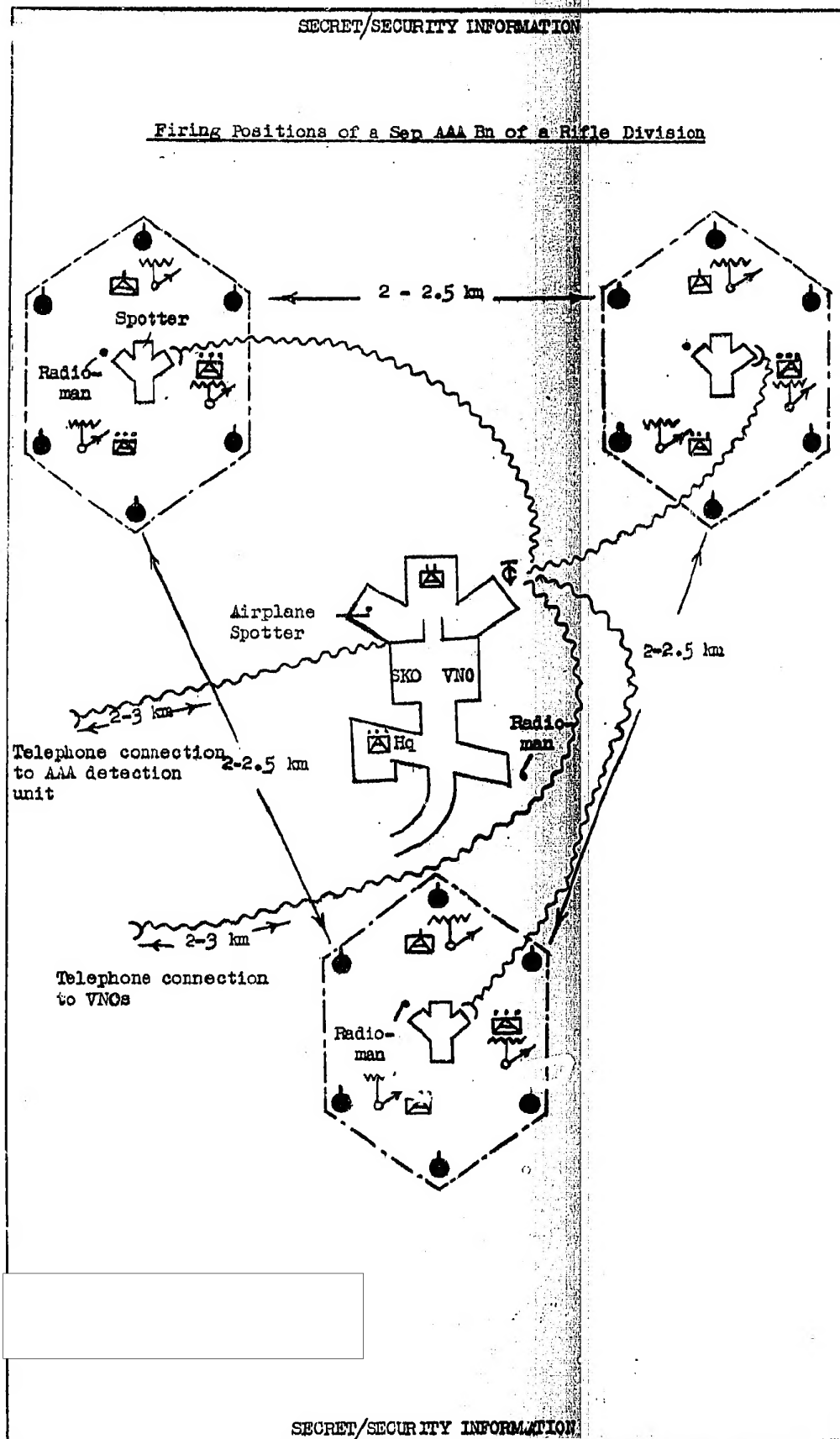
Enclosure (A): Firing Positions of a Sep AAA Bn of a Rifle Division

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ENCLOSURE (A)

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